



Office for
Nuclear Regulation

ONR Report

STATEMENT OF CASE

**Rule 6 Party - Supporting the Refusal
of Full Planning Permission**

ONR Assessment Report

STATEMENT OF CASE

Rule 6 Party - Supporting the Refusal of Full Planning Permission

Appeal Details	
Application Reference No.	22/00244/FULEXT
Appeal Reference No.	APP/W0340/W/22/3312261
Local Planning Authority	West Berkshire Council
Location	Land to the rear of the Hollies, Burghfield
Proposal	The erection of 32 dwellings including affordable housing, parking and landscaping. Access via Regis Manor Road.

Authored by: Eamonn Guilfoyle, Land Use Planning (Workstream Lead), ONR

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List of Abbreviations

AWE(B)	Atomic Weapons Establishment Burghfield
DEPZ	Detailed Emergency Planning Zone
NPPF	National Planning Policy Framework
ONR	Office for Nuclear Regulation
OSEP	Off-Site Emergency Plan
REPPiR01	Radiation (Emergency Preparedness and Public Information) Regulations 2001
REPPiR19	Radiation (Emergency Preparedness and Public Information) Regulations 2019
The Act	Energy Act 2013
The Appellant	T A Fisher and Sons Ltd
The Application	22/00244/FULEXT
The Council	West Berkshire District Council
UKHSA	United Kingdom Health Security Agency

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1. Introduction

1. This section provides the following:
 - a. An explanation of the purpose of this submission;
 - b. An explanation of the basis on which ONR has provided advice on the planning application;
 - c. An overview of the radiation emergency planning regulatory framework, to which later parts of this Statement of Case will refer; and
 - d. A general explanation of the Office for Nuclear Regulation's (ONR) land use planning policy.

1.1. Purpose

2. This Statement of Case has been produced by the ONR in support of the decision of West Berkshire District Council ("The Council") to refuse planning permission for planning application 22/00244/FULEXT ("The Application") brought by T A Fisher and Sons Ltd ("The Appellant") on nuclear safety grounds.
3. ONR advised against planning application 22/00244/FULEXT in its original consultation response, and object to the grant of planning permission. The purpose of ONR's submission is to assist the Inspector in their understanding of the regulatory framework for emergency preparedness and response; the duties of the local authority (LA) in setting a Detailed Emergency Planning Zone ("DEPZ") under the Radiation (Emergency Preparedness and Public Information) Regulations 2019 ("REPP19"); the legal requirement under REPP19 to establish and be able to implement an emergency plan that deals with foreseeable and unforeseen events; ONR's regulatory expectations on what constitutes compliance with the above REPP19 regulations; and the intersection of the LA's REPP19 duties and land use planning responsibilities from ONR's regulatory perspective.

1.2. ONR's Role

4. ONR was established as a statutory Public Corporation on 1 April 2014 under the Energy Act 2013 ("The Act"). We are the UK's independent nuclear regulator for safety, security, and safeguards. Our mission is to protect society by securing safe nuclear operations.

5. ONR's principal function under The Act is that "ONR must do whatever it considers appropriate for the ONR's purposes". Both nuclear safety¹ and nuclear site health and safety² are ONR purposes.
6. ONR also has responsibilities under The Act to "make adequate arrangements for the enforcement of the relevant statutory provisions". Relevant statutory provisions include regulations made under the Health and Safety at Work Act 1974.
7. Land-use planning decisions can have an impact on the safety of nuclear sites through their potential effects on the following:
 - a. Emergency planning, which concerns risks to the proposed development and existing developments from hazards arising at the nuclear site and is conducted by the local authority in accordance with its duties under the REPP19; and/or
 - b. External hazards, which are risks to the nuclear site from hazards arising at or affected by the proposed development (e.g. a proposed development introduces a flooding risk for the nuclear site)³.
8. REPP19 is a relevant statutory provision. Accordingly, ONR is the regulator at GB Nuclear sites and is required to enforce REPP19. Since planning applications may be made for land within DEPZs established in accordance with REPP19, ONR has a direct regulatory interest in such land-use planning applications and the LA's decision-making process for these applications.
9. Additionally, ONR also has a role which is set out in the National Planning Policy Framework (NPPF) Paragraph 45, which states that,

"Local planning authorities should consult the appropriate bodies when considering applications for the siting of, or changes to, major hazard sites, installations or pipelines, or for development around them".
10. The NPPF Glossary defines major hazard sites, installations and pipelines as,

"Sites and infrastructure, including licensed explosive sites and nuclear installations, around which Health and Safety Executive (HSE) (and Office for Nuclear Regulation) consultation distances to mitigate the consequences to public safety of major accidents may apply".

¹ This section brings the specific hazards posed by nuclear installations and nuclear sites within the ONR's remit. [Energy Act 2013 - Explanatory Notes \(legislation.gov.uk\)](#)

² This section defines the ONR's non-nuclear or "conventional" health and safety purposes. This makes clear that one of the purposes of the ONR is securing the protection of persons at work on licensed nuclear sites in Great Britain, as well as the prevention of risks to the health and safety of other persons which arise from the activities carried out on these sites. This ensures that all work-related hazards on licensed nuclear sites are within the ONR's remit. [Energy Act 2013 - Explanatory Notes \(legislation.gov.uk\)](#)

³ Planning Application 22/00244/FULEXT did not constitute an external hazard and so this is not further discussed.

1.3. REPPIR19

11. In May 2019, REPPIR19 came into force, replacing the Radiation (Emergency Preparedness and Public Information) Regulations 2001 (“REPPIR01”). REPPIR19 imposes duties on operators who work with ionising radiation and local authorities to plan for radiation emergencies. REPPIR19 is part of an international, EU and national response to lessons learned from the Fukushima Daiichi nuclear power plant accident in Japan in March 2011. Amongst the significant changes to emergency planning reflected in REPPIR19, is to require risk assessment and planning for events which have a low likelihood of occurrence but high impact in the event they do occur. The new regulations remove references to ‘reasonably foreseeable’ radiation emergencies and strengthen the requirements for operators to assess all hazards arising from work undertaken that has the potential to cause a radiation emergency.⁴
12. ONR’s expertise in REPPIR19 is set out in Appendix 2.

1.3.1. Detailed Emergency Planning Zone

13. REPPIR19 requires the relevant LA to designate a DEPZ. The DEPZ is the geographical zone in which it is proportionate to plan for protective action in the event of a radiation emergency. There are two stages to the process of determining a DEPZ. The word ‘planning’ in the term DEPZ is used in the sense of planning to deal with a radiation emergency to mitigate radiological risk to members of the public; REPPIR19 is not land use planning regulations.
14. The first stage puts duties on the operators of premises which hold quantities of radioactive materials above specified thresholds. Regulation 4 requires the operator to undertake a written evaluation identifying all hazards arising from the operator’s work which have the potential to cause a radiation emergency. The evaluation is referred to as a ‘Hazard Evaluation’ in REPPIR19.
15. Where the evaluation reveals the potential for a radiation emergency to occur, Regulation 5 requires the operator to assess a full range of possible consequences of the identified emergencies. The assessment is referred to in REPPIR19 as a “Consequence Assessment”.
16. The requirements for an assessment include consideration of the range of potential ‘source terms’ (defined as the radioactivity which could be released which includes the amount of each radionuclide released; the time distribution of the release; and energy released); the different persons that may be exposed; the effective and equivalent doses they are likely to receive; the pathways for exposure and the distances in which urgent protective reaction may be warranted for the different

⁴ See paragraph 7. [The Radiation \(Emergency Preparedness and Public Information\) Regulations 2019 Approved Code of Practice and guidance \(onr.org.uk\)](#)

source terms when assessed against the United Kingdom's Emergency Reference Levels published by the United Kingdom Health Security Agency (UKHSA).

17. Regulation 7(1) & 7(2) of REPP19 requires the operator to produce a report setting out the consequences identified by the assessment, called a Consequences Report, which must be sent to the LA. The Consequence Report must include a proposed minimum geographical area from the premises to be covered by the local authority's off-site emergency plan;
18. The second stage of the DEPZ determination process is the responsibility of the LA. Regulation 8(1) of REPP19 provides that the LA must determine the DEPZ based on the operator's recommendation and may extend that area in consideration of local geographic, demographic and practical implementation issues; the need to avoid, where practicable, the bisection of local communities; and the inclusion of vulnerable groups immediately adjacent to the area proposed by the operator.

1.3.2. Off-Site Emergency Plan

19. Regulation 11(1) & (2) of REPP19 provides that, where premises require a DEPZ, the local authority must make an adequate Off-Site Emergency Plan (OSEP) covering the zone. The plan must be designed to mitigate, so far as is reasonably practicable, the consequences of a radiation emergency outside the operator's premises.
20. When preparing or reviewing the OSEP, Regulation 11(5) of REPP19 requires the LA to consult the operator, Category 1 & 2 responders (as per the Civil Contingencies Act 2014), relevant health authorities, the Environment Agency, UKHSA, and such other bodies it considers appropriate.

1.3.3. Testing and Review

21. Regulation 12(1) of REPP19 requires the LA to do the following at suitable intervals not exceeding three years:
 - a. Review and where necessary revise the OSEP; and
 - b. Test the OSEP to the extent necessary to ensure that the plan is effective.
22. Regulation 12(8) of REPP19 requires the LA to produce a report on the outcome of the test, highlighting strengths and weaknesses of the OSEP. Regulation 12(4) of REPP19 requires any review of the OSEP to take into account the report of the outcome of the test.

1.3.4. Site Operations

23. Regulation 10(4) of REPP19 prevents the operator from carrying out work with ionising radiation unless the LA has complied with its duty to produce an adequate OSEP.

1.4. ONR's Land Use Planning Policy

24. ONR has established a Land Use Planning Policy for the purposes of enabling us to provide advice to local planning authorities on proposed developments on and around nuclear sites. The advice provided seeks to limit both the potential for developments to pose external hazards to nuclear sites and the radiological consequences to members of the public in the event of a radiation emergency occurring on such sites.

1.4.1. Process

25. ONR requests consultation from local planning authorities regarding any application for planning permission within one of ONR's land use planning consultation zones that meets the consultation criteria relevant to that consultation zone. We have made the DEPZ one such consultation zone, and any proposed development that has the potential to increase the population in the DEPZ meets our consultation criteria.
26. When consulted on a planning application that has implications for emergency planning, ONR undertakes the following process:
- a. ONR will consult with the emergency planning function within the LA whose area includes the relevant nuclear site;
 - b. ONR will seek assurance from the LA that the proposed development has been discussed with the licensee, if appropriate, and can be accommodated within the LA's existing off-site emergency planning arrangements, or that the off-site emergency planning arrangements will be amended to accommodate the proposed development;
 - c. ONR will state that it does not advise against the proposed development on planning grounds if, in its opinion, the LA emergency planners have provided adequate assurance that the proposed development can be accommodated within their existing off-site emergency planning arrangements (or an amended version); and
 - d. Where adequate assurance has not been given, the ONR Inspector will determine that ONR advises against the proposed development.

2. ONR Advice on Planning Application

27. This section sets out ONR's advice on the planning application and the reasons for that advice. ONR's advice only relates to the second of the Council's grounds for refusal of the planning application: the impact on public safety.

2.1. Context

28. The Council's jurisdiction hosts the Atomic Weapons Establishment Burghfield ("AWE(B)"). The Council has determined a DEPZ for AWE(B) and has produced an OSEP, designed to mitigate, so far as is reasonably practicable, the consequences of a radiation emergency in the DEPZ. Following REPP19 coming into force, the Council first determined the DEPZ on 12 March 2020 and then later re-determined the DEPZ (making minor changes) in January 2023.

2.1.1. REPP19 to REPP19 Changes

29. REPP19 replaced REPP01 on 22 May 2019. However, REPP19 regulation 28 established a statutory 12-month transitional period for existing REPP01 duty holders, which meant that the Council could continue to comply with REPP01 until 21 May 2020
30. During the transition period the following occurred:
- a. The AWE(B) Consequence Report, issued in November 2019, recommended an increase in the minimum radius of the DEPZ from 1600 m to 3160 m, due to changes to assessment methodology;
 - b. The Council determined a new, larger, DEPZ on the 12 March 2020 (REPP19 had shifted the responsibility for determining the DEPZ from ONR to LAs); and
 - c. Following the determination of the new DEPZ it immediately became encompassed by ONR's land use planning arrangements.

2.1.2. Nature of the Radiation Emergency

31. The Consequences Report produced by the operator of the AWE(B) site describes the nature of radiation emergencies that the OSEP must cover. The Consequences Report includes the following:
- a. For the majority of fault sequences, the material released would be in the form of fine particulates of plutonium oxide;
 - b. The release of radioactive particles small enough to be respirable have the potential to result in radiological doses to the public from a range of exposure routes, most notably:
 - i. First-pass inhalation of air from the plume of contamination;

- ii. Long-term inhalation after resuspension of ground contamination by the initial plume;
 - iii. Ingestion of food crops contaminated by the initial plume; and
 - iv. Long-term external irradiation from ground contamination by the initial plume.
- c. The predominant exposure pathway to individuals outside the AWE(B) site during the passage of the plume would be inhalation;
 - d. The recommended minimum geographical extent to be covered by the Council's offsite emergency plan is an area extending to a radial distance of 3160 m from the AWE(B) site centre location;
 - e. The recommended minimum geographical extent represents a dose contour of 7.5 mSv⁵ and is based on the requirement to identify a distance that has the potential to deliver a 3 mSv dose saving when adopting the recommended urgent protective action (sheltering);
 - f. That the recommended urgent protective action is sheltering, which may be necessary for a period of up to two days, and
 - g. For certain (known as Category F) weather conditions, the Council will have in practice 10 minutes to inform the public the public to find suitable shelter in order to realise any substantive benefit from the sheltering action.

2.1.3. Judicial Review

- 32. A legal challenge to adequacy of the rationale for the AWE(B) DEPZ and regulatory oversight of the designation process was dismissed following Judicial Review. The judgment cited ONR's provision of 'detailed evidence of its regulatory oversight'. It further commented that the regulatory oversight by ONR of the DEPZ decision challenge was 'multi-layered', consisting of the following:
 - a. General advice and assistance provided by ONR to dutyholders under REPP19 during the transition period for the new regulations to come into effect;
 - b. Detailed review undertaken by ONR of AWE's recommendation for the DEPZ pursuant to its regulatory tool of 'sampling' by which it selected and reviewed the work of particular operators and local authorities; and
 - c. A wider ongoing regulatory relationship with AWE which ONR drew upon to inform its assessment of AWE's work.

⁵ In simple terms, this means that a member of the public who was 3160 m from the site centre point may potentially receive 7.5 mSv if they did not shelter during the duration of the radiation emergency.

2.2. Planning Application

33. Planning Application 22/00244/FULEXT proposes the erection of 32 dwellings at a site located in the DEPZ of AWE(B). As it is in an ONR consultation zone (the DEPZ) and meets our consultation zone's consultation criteria (as it could lead to an increase in residential populations), it falls within scope of ONR's land use planning arrangements (see section 1.4).

2.3. Consultation Response

34. The Council consulted ONR on Planning Application 22/00244/FULEXT. We followed our processes which led us to advise against the proposed development. The full chronology of the consultation is tabulated in Table 1.

Date	Event
22/02/22	The Council consulted ONR on planning application.
23/02/22	ONR consulted the emergency planning function at the Council on the planning application, asking if it has "any adverse comments on this application & can it be accommodated into the off-site Emergency plan for Atomic Weapons Establishment Burghfield".
17/03/22	The emergency planning function at the Council provided ONR with an internal consultation note stating: "Emergency Planning have reviewed this application and recommend refusal , due to the number of properties within a dense populated area of the Detailed Emergency Planning Zone (DEPZ) and the close proximity to the AWE Burghfield site".
19/03/22	<p>ONR responded to the Council's consultation request, stating that we had "consulted with the emergency planners within West Berkshire Council which is responsible for the preparation of the off-site emergency plan required by the Radiation (Emergency Preparedness and Public Information Regulations) (REPPiR) 2019. They have not been able to provide me with adequate assurance that the proposed development can be accommodated within their off-site emergency planning arrangements.</p> <p>Therefore, ONR advises against this development, in accordance with our Land Use Planning Policy (http://www.onr.org.uk/land-use-planning.htm)."</p>

Table 1 - Consultation Chronology

2.4. Rationale

35. ONR advised against the Application for two overarching reasons, which are set out below.
- a. ONR considers that further development may have the potential to impact upon the adequate implementation of the OSEP. It has formed this view from evidence

collected via its regulatory oversight under REPP19 and its wider engagements with the Council (see sub-section 2.4.1).

- b. The emergency planning function at the Council recommended refusal of the planning application. ONR has satisfied itself, through its wider engagements with The Council, that the emergency planning function has suitable arrangements for making such judgements (see sub-section 2.4.2).

2.4.1. ONR Considerations

36. The increase in the minimum radius of the DEPZ from 1600 m to 3160 m, due to the replacement of REPP19⁶ with REPP19⁶, led to the inclusion of significant population centres; the M4 motorway; and the Madjeski Stadium in the DEPZ. Consequently, the OSEP had to accommodate these features, causing a step change in its complexity and the associated level of challenge in its implementation. Maps of the DEPZs, illustrating the significance of the increase, can be found at Appendix 1.
37. This step change in the complexity of the OSEP meant that historical testing of the previous OSEP (under REPP19⁶) carried substantially less evidential weight as to the new OSEP's tolerance of the further development in the DEPZ.
38. Between 11 May 2021 and 15 February 2022, the Council conducted a series of modular exercises which, collectively, formed the first statutory test of the new OSEP. The workshops and tests highlighted several areas that required improvement, including the following:
 - a. Arrangements for people monitoring (and associated decontamination);
 - b. Arrangements relating evacuation holding areas for displaced persons awaiting monitoring;
 - c. Arrangements for managing the numbers and scale of displaced people, both those outside the DEPZ and unable to return home and those inside the DEPZ who require evacuation; and
 - d. Arrangements for managing those who self-evacuate, especially for ensuring they undergo appropriate monitoring and decontamination.
39. The list above is a subset of a larger list of areas that required improvements (all of which are captured in a report produced by the Council), but this subset is those areas that have a clear dependency on the population in the DEPZ. These areas would be detrimentally impacted by further population increases.
40. While it is normal and expected that tests of an OSEP will identify areas for improvement, in ONR's judgement, the current testing evidence for the AWE(B)

⁶ This was due to changes in the requirements and methodological approaches between the two regulations, which are described in more detail in the AWE(B) Consequences Report.

OSEP suggests that there is uncertainty over whether population increases can be accommodated in the OSEP as it stands.

41. We highlight that our views on the evidence are supported by our observations from our other engagements with the Council. This includes our routine attendance of the AWE Off-Site Planning Group, which is also attended by the Council and responding organisations with a role in the OSEP. In addition to general discussions about the OSEP, the forum also discusses significant planning applications that are within, or close to the AWE(B) DEPZ. This forum enables ONR to understand the expert judgement and opinions of all responding organisations.
42. ONR's view is that the need for a precautionary approach needs to be understood in the context of the nature of the radiation emergency at this site (see sub-section 2.1.2):
 - a. The recommended minimum distance of the DEPZ is the second largest for a GB nuclear site (i.e. the radiation emergency requires a comparatively large geographic response),
 - b. The radiation emergency provides short notice (no more than 10 minutes) for the public to shelter to realise any substantive benefit from the sheltering; and
 - c. The principal radionuclide is of a type that is particularly difficult to monitor (and so requires greater effort and resource from responding organisations).
43. We highlight, for the inspectors information, that our concerns are well-established and pre-date the Application: in August 2021, ONR wrote to the Chief Executive Officer at the Council (and three neighbouring local authorities) expressing concern that further development in the DEPZ would have the potential to impact upon the adequate implementation of the off-site emergency plan.
44. We emphasise that any detrimental impact on public safety affects not only the additional population introduced by the proposed development, but the entirety of the existing population in the DEPZ. Simply put the plan must continue to be implementable and protect everyone in the zone now; and those additions who may be born into households within the zone in coming years.

2.4.2. Council Arrangements

45. The emergency planning function at the Council recommended refusal of the planning application and as we have stated, and as other formal parties have mentioned, this fact is a central consideration in ONR decisions to advise against the development (see paragraph 25c & 25d).
46. It is the responsibility of the Council to explain why it made the specific recommendation in relation the Application. However, we can explain why we seek the Council's recommendation as part of our process and how we have assured ourselves that their arrangements for making recommendations are suitable.

47. We seek the Council's recommendation as part of our process because we recognise the subject matter expertise of the Council in matters of local emergency planning and response.
48. We have assured ourselves that the Council's arrangements for making these recommendations are suitable through the following means:
 - a. We have conducted a series of capability and capacity inspections of the Council;
 - b. We have observed the Council's use of the AWE Off-Site Planning Group to discuss significant planning applications, demonstrating that it is continually seeking the input and expertise of responding organisations; and
 - c. The Council has shared its draft AWE Development Control Process Guidance with us, and this document demonstrates that it considers reasonable and relevant factors in arriving at its judgements.

2.4.3. Forthcoming Test Exercise

49. An exercise to test the AWE(B) OSEP, in accordance with Regulation 12 (1) of REPP19, is due to take place on 24 April 2023 (Exercise ALDEX 23). ONR will inform the Planning Inspector of any relevant observations that is material to the determination of this appeal.

3. Appellant's Arguments

50. ONR's participation in this matter is predicated on being able to assist the Planning Inspector to the best of our ability consistent with our regulatory role, responsibilities, and expertise. Accordingly, we offer the regulatory views and advice on the arguments made in the Appellants Statement of Case.

3.1. ONR Expertise

51. ONR's expertise in these matters is demonstrated by the following:
- a. We have, from our role as a regulator in both REPPIR01 (which came into effect in 2001) and REPPIR19 (which came into effect in 2019), extensive experience of assessing the adequacy of off-site emergency plans and the testing of these plans for nuclear sites across GB;
 - b. We are a Category 2 responder under the Civil Contingencies Act 2014 and support and resource elements of the response in the Council's OSEP; and
 - c. We reviewed the impact of planning decisions on emergency planning and response as part of a major 2011 report by the then Chief Nuclear Inspector on lessons learned from the Fukushima accident in Japan in 2011, which shows we have given thought to these matters for many years.
52. We would highlight the following:
- a. The judgment arising from the aforementioned Judicial Review stated that the "Courts have recognised the need for judicial restraint where the issue under scrutiny falls within the particular specialism or expertise of the defendant public authority";
 - b. The Chief Nuclear Inspector's report on the Fukushima accident stated that the "practicability of implementing off-site countermeasures is inextricably linked to the density and distribution of people around the nuclear site" and that in "making decisions on planning consent for developments near to nuclear sites, it is therefore vital that ONR's expert advice on these matters continues to be given full consideration by the relevant planning authorities"; and
 - c. The National Policy Statement for Nuclear Power Generation (EN-6 Vol II) states that "ONR administers the Government's policy on the control of population around licensed nuclear sites" and, although EN-6 only relates to nuclear power plants (which does not include AWE(B)), this statement as expresses a wider policy intent of development control extending for all licensed nuclear sites (which includes AWE(B)).

3.2. Likelihood of a Radiation Emergency

53. The Appellant's Statement of Case makes arguments as to the likelihood of a radiation emergency being low (paragraphs 6.37, 6.43, 6.44, 7.4), as does the Appellant's Appendix Q (paragraphs 23-60, 73).
54. We restate that REPP19 places a statutory duty on the Council to produce an OSEP that is operable and viable should the consequences described in the operators Consequences Report occur. This is to say that when evaluating the adequacy of the OSEP, it must be assumed that the radiation emergency has happened: probability considerations are irrelevant to this evaluation.
55. In its response to the consultation on the draft REPP19 the government stated that "The risk of a radiation emergency is therefore extremely low, but there must be robust emergency preparedness and response arrangements in place for radiological emergencies, however unlikely they may be".
56. Therefore, we advise that in the making of the planning decision, the question is not "what is the likelihood of the radiation emergency?". Rather, the question is "will the OSEP be effective in the event of an emergency?".

3.3. Severity of a Radiation Emergency

57. The Appellant's Statement of Case makes arguments as to the level of harm arising from a radiation emergency being low (paragraphs 6.37, 6.44, 7.5, 7.6), as does the Appellant's Appendix Q (paragraphs 73-76, 78).
58. We highlight that REPP19 defines a radiation emergency as being an event that has "serious consequences". The Nuclear Emergency Planning and Response Guidance states that "an emergency involving the release of radiation into the wider environment which requires the implementation of public protection countermeasures to be implemented within the Detailed Emergency Planning Zone (DEPZ)" constitutes a "serious emergency" and will be "treated as a national level response".
59. We highlight that the unmitigated radiation dose received by a member of the public in the event of the radiation emergency at AWE(B) has been calculated in accordance with the methodology set out in REPP19, that this calculation was used in the designation of the DEPZ, and the adequacy of the rationale for the AWE(B) DEPZ was upheld at Judicial Review.
60. We highlight that the radiation dose calculated is significant enough for the following:
 - a. To bring AWE(B) in-scope of REPP19 and all the requirements therein;
 - b. To warrant urgent protective action (which is sheltering potentially up to two days) in the event of a radiation emergency designed to reduce this dose; and

c. To warrant a multi-agency response, both local and national, in the event of a radiation emergency in order to mitigate its consequences.

61. We further highlight that there are public health consequences resulting from a radiation emergency beyond that of radiation dose. Long-term consequences of a nuclear emergency are set out in Annex U of the Nuclear Emergency Planning and Response Guidance. This describes the impact on health and well-being of radiation emergency including a profound psychological impact on people and harm arising from the disruption to normal living over extended periods of time. The World Health Organisation has also set out the psychosocial harms arising from radiation emergencies, including from sheltering in place, evacuation, and radiation monitoring.
62. We advise that in the context for decision-taking here is that the level of public harm arising from a radiation emergency at AWE(B) would be significant.

3.4. Sheltering

63. The Appellant's Statement of Case emphasises the role of sheltering in the OSEP and describes it as a "simple protective action" (paragraph 6.37, 7.8).
64. We do not consider sheltering for a period of up to two days to be a "simple protective action" nor do we consider that sheltering does not create a burden on responding organisations: consideration would have to be given on how to provide medication, specialist healthcare, and food where such things are needed by sheltering members of the public.
65. We highlight that there is a short timeframe both to notify the public to shelter and for the sheltering to be into effect (10 minutes). We further highlight that AWE public warning systems have not been tested within the public domain and therefore the response of the public is uncertain.
66. We advise that sheltering should not be considered a "simple" protective action and that additional population required to shelter does increase the challenge to the OSEP.
67. We highlight that, while shelter and (potentially) evacuation are important components of the OSEP, the emergency response has many more elements. These include, but are not limited to, the following:
- a. The delivery of people monitoring for health and reassurance purposes (and associated decontamination), the facilities for which have restricted throughput;
 - b. The provision of emergency accommodation for evacuated persons;
 - c. The need for emergency services to access the affected areas, which is affected by road traffic level and issues like the self-evacuation of residents; and

d. The need to implement timely road closures, which is affected by road traffic levels.

68. We advise that an additional population creates challenges to the OSEP beyond that arising from the additional requirement to shelter.

3.5. Precedent

69. The Appellant's Statement of Case refers to the advice ONR gave for developments at Tadley Hill, 42-46 New Road Tadley, Boundary Place⁷. The Appellant's Appendix Q refers to advice ONR gave for a development in the DEPZ of the Devonport Royal Dockyard⁸.

70. We advise that, with respect to our advice, the circumstances of these examples are materially different from the Application:

- a. The example proposed developments are in the DEPZs of other nuclear sites, with radiation emergencies of a different nature that pose different challenges; and
- b. That the emergency planning function at the relevant local authorities provided ONR with adequate assurance that the developments could be accommodated in the OSEP.

⁷ Basingstoke and Deane Borough Council Planning Application Ref 21/00893/FUL

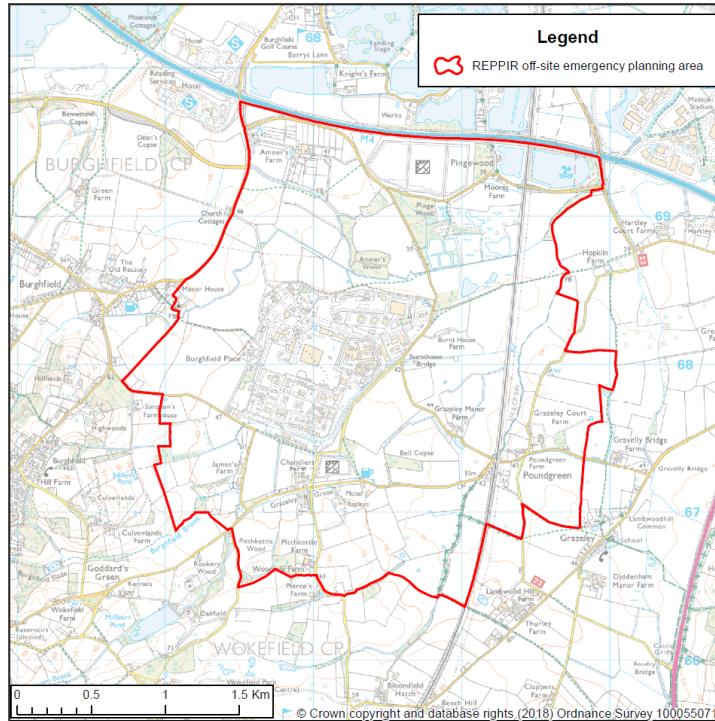
⁸ Plymouth City Council Planning Application Ref. 22/00878/FUL

4. Conclusions

4.1. Conclusions

71. The proposed development should be considered in respect of its impact on the adequacy of the OSEP. No consideration should be given to the probability or severity of the radiation emergency addressed by the OSEP, since the efficacy of the plan has to be assessed in the context of an emergency arising and an emergency is, by definition, severe
72. The additional population introduced to the DEPZ by the proposed development should be considered in respect of the challenges it makes to the adequacy of all population-sensitive aspects of the OSEP. The evaluation of its impact should not be confined only to sheltering but, where sheltering is considered, this should be recognised as a complex protective action and the population-sensitive aspects of this should also be given due consideration.
73. ONR has considered the following:
 - a. Evidence supplied by the statutory test of the OSEP made in accordance with REPP19;
 - b. Evidence supplied from ONR's extensive engagements with the Council and responding organisations; and
 - c. The refusal recommendation made by the emergency planning function of the Council (noting that ONR has satisfied itself that the emergency planning functions arrangements for producing such recommendations are suitable).
74. Therefore, ONR judges that there is substantial uncertainty as to whether OSEP can accommodate further development and that such uncertainty requires a corresponding substantial margin of safety, and so advises against the proposed development.

Appendix 1 – Comparison of DEPZs



**Figure 1 - REPPiR01 Off-Site Emergency Planning Area⁹ for AWE(B) - 27 February 2018
(Taken from ONR-COP-PAR-17-06)**



Figure 2 - REPPiR19 DEPZ for AWE(B) - 12 March 2020

⁹ “Off-Site Emergency Planning Area” is the terminology used in REPPiR01 but is functionally similar to the DEPZ in REPPiR19

Appendix 2 – ONR’s Expertise in REPP19

A. Background

1. ONR (or in its former name NII) has been integral to Great Britain’s approach to on-site and offsite nuclear emergency planning for over 30 years. The current legal requirement (REPP19) was developed by a range of government bodies including ONR as a key partner. Currently, the only sites in GB which have a requirement for an off-site plan are either Nuclear Licensed Sites or Nuclear Authorised defence sites. Regulation 2(1) of REPP19 identifies the Office for Nuclear Regulation as the statutory regulator for such sites and is the only public body with such powers.

B. Legislation and Guidance

2. REPP19 was introduced to replace REPP01 in 2019. The revised approach aligns more coherently with international practice and was arrived at after considerable discussion across multiple government departments, local authorities and representatives from nuclear sites. REPP19 is supported by an Approved Code of Practice (“ACOP”). The ACOP is statutory guidance. If a duty holder follows the Code, they will be meeting their statutory duties. If they do not follow the advice in the Code, they may still be meeting their duties, but it will be for the duty holder to demonstrate the approach they have taken is equivalent to the Code and therefore meets these expected standards. ONR produced the ACOP on behalf of the Health and Safety Executive (HSE), but with oversight from a Steering Group comprising duty holders, the co-regulators (HSE and ONR), the Devolved Administrations, Government Departments, and other agencies such as Public Health England (now UKHSA).
3. The ACOP is designed to provide users with confidence in how to comply with the law. In particular, the ACOP is intended to help duty holders where:
 - a. There are certain preferred or recommended methods to be used (or standards to be met) to achieve compliance; and
 - b. The nature of the issue being addressed is such that in most cases users should be strongly encouraged to pursue those methods
4. ONR administered the public consultation on the ACOP, addressing comments from 47 organisations, including nuclear site operators and local authorities.
5. ONR has set the expectations for compliance with REPP19 and understands how those expectations are met.

C. Regulation

6. ONR regulates both local authorities and operators in their discharge of responsibilities under REPP19. This involves considerable interaction with these organisations and gaining a genuine understanding of the hazards posed and the

nature and viability of the off-site plans. As part of our responsibilities under the regulators code we are required to demonstrate consistency in our regulation across organisations. In addition to the review of documentation we witness exercises designed to test the on and off-site response plans. If necessary, we may take action to ensure arrangements are modified to meet the expectations of REPP19.

D. ONR's Role in a Radiation Emergency

7. ONR is required to communicate with other emergency responders in the event of a radiation emergency by providing independent advice to the relevant authorities at local and national levels. We may also have a subsequent investigatory role to determine the underlying causes of the incident, identify any breaches in legislation, prevent a recurrence and consider appropriate enforcement.
8. A key aspect of any off-site emergency plan is the setting up of a Strategic Co-ordination Group (SCG). The SCG would be attended by the local council, emergency services, UKHSA, and a number of other relevant organisations. ONR would attend in both an advisory capacity, and also to facilitate information flow to regulatory colleagues at ONR headquarters and elsewhere.
9. At a national level, the Government's Cabinet Office Briefing Room (COBR) would likely be set up, supported by the Lead Government Department (e.g. BEIS or the Ministry of Defence). Within these arrangements, senior ONR representatives, usually our Chief Nuclear Inspector or a nominated deputy would provide independent advice and guidance to the Scientific Advisory Group for Emergencies (SAGE), which would be advising COBR and the Lead Government Department. Similarly, if the radiation emergency was in Scotland or Wales, ONR would also provide advice directly to the Scottish Government Resilience Room or Welsh Emergency Coordination Centre.
10. To support this, ONR would set up its own incident suite (Redgrave Court Incident Suite (RCIS)) at its headquarters in Bootle, Merseyside to monitor the activities of the operator and form an independent view. For example, the RCIS was fully operational from the first day of the serious nuclear accident at Fukushima Dai-ichi in 2011 and remained so for several weeks. ONR's emergency response arrangements are regularly tested through our involvement in tests of off-site emergency plans (referenced above). We continuously seek to improve our own arrangements through learning from these exercises.
11. ONR understands the national and local response to nuclear emergencies, and the requirements on, and challenges facing, responding organisations.